

Additionally, the drawings have been formalized so as to comply with 37 C.F.R. 1.84. These formal drawings illustrate the features that the Examiner believed were not fully shown in the informal drawings.

#### REMARKS

Claims 1-58 are pending in this application. Claims 1, 24, 28-30, 35, 37-38, 41, 43, 45, 47, 49, 53, 55-58 have been amended in this Response.

Applicants thank the examiner and his supervisor for the courtesy extended to them during the videoconference interview conducted on August 10, 2001.

The Examiner objected to the drawings for not clearly showing the demarcation between elements 300(5), 300(6), and 300(7). The Applicants have submitted formal drawings with this Response that obviates the Examiner's objection as all features are clearly shown in these drawings. Likewise, the Applicants have requested correction of three minor errors in the drawings. A view marker line "336" was also labeled "344" in both Figs. 3B and Fig. 3C; Applicants request that reference number "344" be removed from these figures. In Fig. 4, reference element "412" was inadvertently used for both "a second axis for quantity" and for a "bid token." Applicants have requested that the reference element for the bid token be changed from "412" to "417," a number that has not been previously used in the drawings.

Similarly, the Applicants have requested that reference number "412" for the "bid token" be changed in the specification to reference number "417." The Applicants have also requested correction of typographical errors on page 14. These requested changes do not introduce new matter into the specification.

The Examiner objected to claim 24 for reciting "bid icon" rather than "offer icon." The Examiner also objected to claims 56 and 58 for reciting "said trend line" without an antecedent basis. The Applicants have corrected the cited errors in these claims and

respectfully requests that the Examiner remove these objections. The Applicants have also made clarifying amendments to claims 29, 30, 37, and 38.

The Examiner rejects independent claims 41 and 43 as being anticipated by Belden. Claim 41 recites, among other things, communicating all outstanding offers and all outstanding bids to remote terminals, such as those operated by market participants. Claim 43 recites a transaction server that transmits “bids lower than a best bid” and “offers higher than a best offer.” The communication of all outstanding bids and offers and bids and offers other than the “best” bid and “best” offer provides the trader with significantly more valuable information than systems which display only “best/bid” offer – such as a current “market” quotation.

Belden discloses a user interface for supporting some aspects of a market participant’s activities in a conventional market. Belden aims to replicate a conventional market *as it exists* and specifically teaches away from providing traders with any more information than they would conventionally receive on the trading floor:

The electronic market in accordance with the present invention, provides most of the information that is *now* available in the real pits and on the exchange floors and additional information and capabilities not currently available. *For example, only the bids and offers that are at the market are presented, just as it is done in the physical pit.* (Belden, Col. 5, lines 20-27. (emphasis added.))

Fig. 2B of Belden illustrates this approach showing only the current bid and offer value. (See, Fig. 2B and Col. 14, line 21 – Col. 17, line 16.) In accordance with his stated goal, Belden does not disclose or suggest a tool for analyzing or studying market behavior – anymore than a trader’s physical presence in a trading pit provides a tool for studying market behavior. Belden does not disclose or suggest exposing “the book” (*e.g.*, all bids and offers) to market participants. Moreover, Belden also does not disclose or suggest an axis of values or an axis of quantities upon which orders (*e.g.*, bids and offers) received from traders may be displayed, studied, and/or tracked.

Claims 41 and 43 recite communicating information that is not conventionally provided in a physical trading pit and clearly recite communicating information that Belden

not only does not provide but that Belden specifically teaches away from providing. Thus, Belden neither discloses nor suggests claims 41 and 43.

The Examiner rejects independent claims 1, 28, 35, 45, 47, 49, 55 and 57 over Belden in combination with various other references (Anupam, Anupam and Sacerdoti). Belden's limitations are discussed above. Anupam's disclosure pertains to various data visualization techniques. Like Anupam, Sacerdoti also discloses various data visualization techniques. First, Belden's explicit teaching that a trading system should merely replicate the conventional market removes any motivation for an ordinarily skilled artisan to combine Belden with Anupam or Sacerdoti. Second, even if an ordinary artisan combined Belden with Anupam and/or Sacerdoti, the resulting system would be markedly different from the Applicants' claimed invention since Belden merely intends to replicate the existing market. At best, such a combination would provide Belden's system showing only the current best bid and offer with a nicer graphical display.

During the interview on August 10th, the Examiner acknowledged that Belden did not teach or suggest the claims, and that the combination of Belden with the other references (Anupam, etc.) did not disclose or suggest the invention. However, the Examiner expressed concern that claims 1, 28, 35, 45, 47, 49, 55, and 57, as originally filed, could possibly read on Belden in certain transient and vestigial instances, such as when a system might only display a single order icon for an instant before other order icons were displayed. Accordingly, claims 1, 28, 35, 45, 47, 49, 55, and 57 have been amended to variously recite a "plurality" of other bids and/or offers, so as to avoid claiming the momentarily brief instance when the claimed system or method might display *de minimus* information about a market.

The Examiner rejects independent claims 32 and 53 over Belden in view of Anupam and in further view of Bernstein. Applicants' claims 32 and 53 recite, among other things, arranging trader icons on a pit panel icon with respect to the traders' activity levels. The shortcomings of Belden, Anupam, and combinations thereof have been discussed above. Bernstein merely describes a conventional trading pit. Assuming *arguendo* that an ordinary artisan had sufficient motivation to combine Belden, Anupam, and Bernstein, the resulting combination would likely produce, at best, a graphical depiction of a trading pit from a

conventional exchange. None of the cited references, nor any combination of these references, disclose or suggest the invention recited in Applicants' claims 32 and 53. Accordingly, the Applicants respectfully request that the Examiner withdraw the rejection of claims 32 and 53 as obvious over Belden in view of Anupam and in further view of Bernstein.

Thus, the cited references, neither individually nor in any motivated combination, fail to disclose or suggest the Applicants' claimed invention. For these reasons, Applicants respectfully submit that claims 1-58 are allowable over the cited references and request that the application be passed to issue. If the Examiner believes that direct contact with Applicants' attorney will advance the prosecution of this case, the Examiner is invited to telephone the undersigned at the number given below.

Respectfully submitted

RICHARD W. FRIESEN, et al.

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By:



Thomas L. Ewing, Reg. No. 34,328  
Fenwick & West LLP  
Two Palo Alto Square  
Palo Alto, CA 94306  
Tel.: (415) 875-2336  
Fax: (415) 281-1350

Attachment: Specification Revisions  
Claim Revisions  
Formal Drawings  
Information Disclosure Statement



**VERSION WITH MARKINGS TO SHOW CHANGES MADE**  
**SPECIFICATION REVISIONS**

Kindly replace the paragraph beginning at line 13 of page 14 and running to line 9 of page 15 with the following paragraph:

“The value axis 332 indicates the value at which an item is being traded. This value may represent different qualitative measures for an item, such as the raw price for the item; for bonds, the value could be the cost for the bond or the implied interest rate for the bond, or the value be used as a measure for an implied volatility of the item, for example, a generic measurement of the relative expense of an option. Each trader can use [their] his own value scale. For example, one trader may use a bond cost as an axis of values and another may use the implied interest rate of the bond. Regardless of a trader’s choice of value, the different orders are displayed on the trader’s screen in terms of the value the trader [is] has chosen. Additionally, the value scales are completely customizable. For example, a gold arbitrageur could create a scale that measures the difference between the futures price of the metal less the spot cash price of the metal. The arbitrageur could then apply the cost of carry, including insurance and storage, to the future/cash price difference to generate an implied interest rate for the gold. Thus, the value axis for the arbitrageur would be an interest rate. In another example a trader who is interested in trading soybean oil could buy and sell soybeans, but, by using a value axis which accounts for the current cost of crushing soybeans, storage of soybeans, transport, etc, can be actually trading in soybean oil. Thus different traders in the same trading pit 220 would see the same bid and offers but organized with respect to their own specific value axis. Thus, the present invention provides enormous flexibility in constructing a view of an item’s value which is directly representative of the trader’s own interest in the item.”

Kindly replace the paragraph beginning at line 11 of page 19 and running to line 4 of page 20 with the following paragraph:

Figure 4 illustrates an alternate view of the user interface in accordance with the present invention. The value/quantity view 420 illustrates the market for the item using a first axis of values 408 and a second axis 412 for quantity. Thus, the location of each offer icon 400 and each bid icon 404 represents the value for the offer or bid and the quantity for which the offer or bid is made. Optionally, the action line 336 is also displayed, as well as the contextual data. The alternate view provides a different intuitive perspective on the state of the market. By providing alternate views, as shown in Figure 3c, the electronic trading system of the present invention allows the different preferences of different traders to be met. Orders in this view are placed by selecting an offer token 416 or a bid token [412] 417 and moving the token to a location which corresponds to the desired quantity and value. If the trader wishes to purchase immediately, the trader can simply drag a bid token [412] 417 to the location directly over any offer token, and a window pops up displaying a bid order with value and quantity equal to that of the offer token. If the trader wishes to sell immediately, the trader can simply drag an offer token 416 to the location directly over any bid token, and a window pops up displaying an offer order with value and quantity equal to that of the bid token. The trader can then execute the transaction.

### **CLAIM REVISIONS**

1. (Once Amended) A method for displaying transactional information regarding the buying and selling of items in a system where orders comprise a bid type or an offer type, and an order is generated for a quantity of items at a specific value, the method comprising:
  - displaying [at least one bid icon] a plurality of bid icons, each corresponding to a bid for a quantity of items, each bid icon at a location along a first axis of values corresponding to the value of the bid, including bids having different values; and
  - displaying [at least one offer icon] a plurality of offer icons, each corresponding to an offer type order for a quantity of items, each offer

11                    icon at a location along the first axis of values corresponding to the  
12                    value of the offer, including offers having different values.

1                    24.    (Once Amended) The method of claim 1 wherein displaying at least one bid  
2                    icon further comprises:

3                    displaying at least one bid icon at a location with respect to a second axis of  
4                    quantities at a location corresponding to the quantity of the bid; and  
5                    wherein the step of displaying at least one [bid] offer icon further  
6                    comprises:

7                    displaying at least one offer icon at a location with respect to a second axis of  
8                    quantities at a location corresponding to the quantity of the offer.

1                    28.    (Once Amended) A method for placing an order for an item at a desired value  
2                    for a desired quantity in a system in which remote terminals display all outstanding orders for  
3                    the item wherein orders comprise bids and offers, and a transaction server receives orders  
4                    transmitted by each remote terminal and communicates the received orders to all remote  
5                    terminals, comprising:

6                    displaying [at least one order token] a plurality of order tokens having  
7                    different values;

8                    receiving a selection for an order token; and

9                    moving the order token to a user specified location with respect to a value axis  
10                    and a quantity axis which corresponds to the desired value and quantity  
11                    for the order.

1                    29.    (Once Amended) The method of claim 28 [further comprising a method of  
2                    purchasing an item at a desired value for a desired quantity,] wherein [said method for]  
3                    purchasing an item comprises:

4                    determining whether a displayed offer icon exists at a location corresponding  
5                    to the desired quantity and value; and

6 responsive to a displayed offer icon existing at a location corresponding to the  
7 desired quantity and value, selecting a bid icon and moving the bid  
8 icon to the location occupied by the displayed offer icon.

1 30. (Once Amended) The method of claim 28 [further comprising a method of  
2 selling an item at a desired value for a desired quantity,] wherein [said method for] selling an  
3 item comprises:

4 determining whether a displayed bid icon exists at a location corresponding to  
5 the desired quantity and value; and  
6 responsive to a displayed bid icon existing at a location corresponding to the  
7 desired quantity and value, selecting an offer icon and moving the offer  
8 icon to the location occupied by the displayed bid icon.

1 35. (Once Amended) A computer-readable medium, for an electronic trading  
2 system in which items are bought and sold responsive to orders submitted by traders, each  
3 order specifying a value and quantity for the order, said computer-readable medium  
4 containing a program containing instructions to cause a processor to:  
5 display a first axis representing values of an item;  
6 display [at least one bid icon] a plurality of bid icons, each corresponding  
7 [which corresponds] to a quantity of items in a bid for the item and a  
8 value of the bid at a location with respect to the first axis; and  
9 display [at least one offer icon] a plurality of offer icons, each corresponding  
10 [which corresponds] to a quantity of items in an offer for the item and  
11 a value of the offer at a location with respect to the first axis.

1 37. (Once Amended) The computer-readable medium of claim 35 wherein [the]  
2 at least one bid icon is displayed having a size corresponding to a quantity of items specified  
3 by the bid and [the] at least one offer icon is displayed having a size corresponding to a  
4 quantity items specified by the offer.



1           38.   (Once Amended) The computer-readable medium of claim 35 further causing  
2 the processor to:

3           display a second axis representing quantities of an item; and [the] at least one  
4           bid icon is displayed at a location which corresponds to the quantity of  
5           the bid and the value of the bid, and [the] at least one offer icon is  
6           displayed at a location which corresponds to the quantity of the offer  
7           and the value of the offer.

1           41.   (Once Amended) A method for conducting the buying and selling of items  
2 comprising:

3           receiving [at least one bid] a plurality of bids from a first remote terminal and  
4           a plurality of offers [offer] for at least one item from a second remote  
5           terminal;

6           matching a bid for an item with an offer for an item, responsive to the bid  
7           corresponding to the offer; and

8           communicating all outstanding bids and all outstanding offers, including any  
9           bids lower than a best bid and any offers higher than a best offer, to a  
10          plurality of remote terminals for display on the remote terminals,  
11          including the bid received from the first remote terminal and the offer  
12          received from the second remote terminal.

1           43.   (Once Amended) A system having a plurality of client terminals for  
2 generating bids and offers on items, and displaying received information on outstanding bids,  
3 outstanding offers, and items upon which bids and offers are made, wherein the system is for  
4 conducting the buying and selling of items, the system comprising:

5           a transaction server, coupled to the plurality of client terminals, for receiving  
6           bids and offers for the items from the client terminals, matching offers  
7           to corresponding bids, and transmitting information on items,  
8           outstanding received bids, and outstanding received offers, including

9                    any bids lower than a best bid and any offers higher than a best offer,  
10                   to the plurality of client terminals.

1            45.    (Once Amended) A method of providing an interface to an electronic trading  
2            system in which items are bought and sold responsive to orders placed by users of the  
3            electronic trading system, each order specifying a value and quantity for the order, said  
4            method comprising:  
5                   displaying a selection of views for a user;  
6                   receiving an input selecting a first or second view for display;  
7                   responsive to receiving an input selecting a first view, displaying the first view  
8                   having an axis of values, wherein the first view displays a plurality of  
9                   order icons, each [an] order icon for each outstanding order for an  
10                  item, and the order icons are displayed at locations with respect to the  
11                  value axis corresponding to the value of the order; and  
12                  responsive to receiving an input selecting a second view, displaying the  
13                  second view having an axis of values and an axis of quantities,  
14                  wherein the second view displays a plurality of order icons, each [an]  
15                  order icon for each outstanding order for an item, and the order icons  
16                  are displayed at locations with respect to the value axis and the  
17                  quantity axis corresponding to the value and quantity of the order.

1            47.    (Once Amended) A user interface for an electronic trading system in which  
2            offers and bids are generated, each offer and bid having a value and quantity, the user  
3            interface comprising:  
4                   an axis of values;  
5                   an axis of quantities;  
6                   [at least one offer icon] a plurality of offer icons, each representing an  
7                   outstanding offer at a location corresponding to the value and quantity  
8                   of the offer; and

9 [at least one bid icon] a plurality of bid icons, each representing an  
10 outstanding bid at a location corresponding to the value and quantity of  
11 the bid.

1 49. (Once Amended) A user interface for an electronic trading system in which  
2 offers and bids are generated, each offer and bid having a value and quantity, the user  
3 interface comprises:  
4 an axis of values;  
5 [at least one offer icon] a plurality of offer icons, each offer icon representing  
6 an outstanding offer at a location corresponding to the value and  
7 quantity of the offer and having a size corresponding to the quantity of  
8 the offer; and  
9 [at least one bid icon] a plurality of bid icons, each bid icon representing an  
10 outstanding bid at a location corresponding to the value and quantity of  
11 the bid and having a size corresponding to the quantity of the bid.

1 53. (Once Amended) A user interface for an electronic trading system in which  
2 traders generate offers and bids for items, the user interface comprising:  
3 a pit panel icon representing a trading pit for trading the item, including a  
4 plurality of concentric areas; and  
5 trader icons, wherein each trader icon represents a trader currently trading an  
6 item in the trading pit and each trader's location with respect to the pit  
7 panel icon corresponds to an activity level for the trader.

1 55. (Once Amended) A method for displaying transactional information in an  
2 electronic trading system in which offers and bids are generated, each offer and bid having a  
3 value and quantity, the method comprising:  
4 displaying an axis of values;  
5 displaying an axis of quantities;

6 displaying [at least one offer icon] a plurality of offer icons, each offer icon  
7 representing an outstanding offer at a location corresponding to the  
8 value and quantity of the offer; and  
9 displaying [at least one bid icon] a plurality of bid icons, each offer icon  
10 representing an outstanding bid at a location corresponding to the  
11 value and quantity of the bid.

1 56. (Once Amended) The method of claim 55 wherein the axis of values is a  
2 vertical axis, and the method further comprises:  
3 displaying a historical chart of contextual data, wherein [said] a trend line is  
4 generated responsive to a horizontal axis of time and the vertical axis  
5 of values.

1 57. (Once Amended) A method for displaying transactional information for an  
2 electronic trading system in which offers and bids are generated, each offer and bid having a  
3 value and quantity, the method comprising:  
4 displaying an axis of values;  
5 displaying [at least one offer icon] a plurality of offer icons, each offer icon  
6 representing an outstanding offer at a location corresponding to the  
7 value and quantity of the offer and having a size corresponding to the  
8 quantity of the offer; and  
9 displaying [at least one bid icon] a plurality of bid icons, each bid icon  
10 representing an outstanding bid at a location corresponding to the  
11 value and quantity of the bid and having a size corresponding to the  
12 quantity of the bid.

1 58. (Once Amended) The method of claim 57 wherein the axis of values is a  
2 vertical axis, and the method further comprises:

3 displaying a historical chart of contextual data, wherein [said] a trend line is  
4 generated responsive to a horizontal axis of time and the vertical axis  
5 of values.  
6